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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,685	09/12/2006	Hiroshi Ichigaya	101539.57354US	9221
23911 7590 03/19/2009 CROWELL & MORING LLP INTELLECTUAL PROPERTY GROUP P.O. BOX 14300 WASHINGTON, DC 20044-4300			EXAMINER MCLAREN, STEPHANIE D	
			ART UNIT 3744	PAPER NUMBER
			MAIL DATE 03/19/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/566,685

Applicant(s)

ICHIGAYA, HIROSHI

Examiner

STEPHANIE MCLAREN

Art Unit

3744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This office action is issued in response to the amendment filed November 24, 2008.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 17-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elsherif et al. (5,564,124).

With regards to claim 17, Elsherif et al. disclose a cooling suit to be worn on a wearer, comprising: at least one air inlet configured to introduce outside air (26, col. 4, line 17-18); at least one parallel airstream generation means having: vanes; a motor for rotating said vanes; a front face formed with an air suction port; and a side surface formed with a parallel airstream deliver portion (fans 50, 52); the or each parallel airstream generation means being provided for introducing outside air from said air suction port and for blowing the air substantially in a sideward direction from said parallel airstream deliver portion to generate parallel airstreams which are substantially parallel to the wearer's body (50, 52, col. 7, line 2-3); a guide sheet simultaneously serving as a garment and for guiding the parallel airstreams generated by the or each parallel airstream generation means, parallelly to the wearer's body (20, col. 3, line 55-

58); air leakage prevention means for preventing air leakage from a hemline portion of said guide sheet simultaneously serving as the garment (whereby the hemline is sealed except at the air inlet point, see fig. 4); at least one air exit portion configured to discharge the parallel airstreams to the exterior (34, 36, 38, 40, 42, col. 4, line 5-8); and electric-power source means detachably provided on said guide sheet and for supplying electric power to the or each parallel airstream generation means (col. 3, line 55); wherein the or each air inlet is formed in said guide sheet (26, col. 4, line 17-18); wherein the or each parallel airstream generation means is detachably provided inside said guide sheet so that said air suction port of the or each parallel airstream generation means is opposed to the or each associated air inlet formed in said guide sheet, and so that said parallel airstream deliver portion of the or each parallel airstream generation means is positioned inside said guide sheet (col. 3, line 53-54); to cause positive pressures between said guide sheet and the undergarment (18) or wearer's body to thereby automatically produce an air flow space there between (col. 4, line 36-39, whereby any air flow into a flexible enclosure will automatically produce an airflow space between the layers), and the or each parallel airstream generation means causes the blown air to flow through said air flow space to thereby discharge moisture due to perspiration to the exterior and to thereby constantly feed fresh outside air into said air flow space, thereby largely intensifying conditions where perspiration can be evaporated (by definition, blown air will cause greater evaporation by convective cooling).

Elsherif fail to disclose: the or each parallel airstream generation means cooperatively blows air of a total amount of about 10 m³/H to 500 m³/H into between

said guide sheet and an undergarment or wearer's body. However, the speed of the airflow affects the evaporative cooling capability of the invention, and must be carefully selected so as to achieve the maximum cooling impact without creating undue pressure on the person to be cooled due to severe inequalities between the air input and the air output. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to blow air to a total amount of 10 m³/H to 500 m³/H because over such a large range of acceptable values, it is quite likely that one would be an optimal value for a given application in cooling suits, and it has been held that determining an optimum value for a results effective variable is within the ordinary skill in the art.

With regards to claim 18, Elsherif et al. disclose wherein each parallel airstream generation means comprises a sideward-flow fan (50, 52, capable of, col. 7, line 2-4)

With regards to claim 19, Elsherif et al. disclose a system further comprising a fan guard attached to an air inlet of the or each parallel airstream generation means (50, 52, see fig. 8).

With regards to claim 20, Elsherif et al. disclose a system wherein the or each parallel airstream generation means comprises: a propeller fan or mixed-flow fan (50,52); and a parallel airstream conversion plate (68); and wherein said propeller fan or

mixed-flow fan and said parallel airstream conversion plate are integrated with each other (50, 52 capable of, col. 7, line 2-4).

With regards to claim 21, Elsherif et al. disclose a system wherein the or each parallel airstream generation means includes a parallel airstream deliver portion formed with a fan guard (50, 52, see fig. 8).

With regards to claim 22, Elsherif et al. disclose a system further comprising suspending means for suspending the or each parallel airstream generation means from the above so that parallel airstreams delivered by the or each parallel airstream generation means are made substantially parallel to the wearer's body (col. 3, line 59-60).

With regards to claim 23, Elsherif et al. disclose a system further comprising fixation means provided for fixing the or each parallel airstream generation means to the wearer's body or undergarment (col. 3, line 57-60).

With regards to claim 24, Elsherif et al. disclose a system wherein said electric-power source means comprises a battery (capable of, col. 3, line 60-61). It would have been obvious to one having ordinary skill in the art to also use an equivalent power source such as a fuel cell for simple substitution of one known element for another to obtain predictable result.

With regards claim 25, Elsherif et al. disclose a system wherein the or each parallel airstream generation means are provided by two in total number which include one and the other provided at the right and left of a lower portion of a back side of the wearer, respectively (50, 52, see fig. 3, fig 7).

With regards to claim 26, Elsherif et al. disclose a system wherein the or each air exit portion is an end of said guide sheet simultaneously serving as the garment (34a, 36a, 38a, see fig. 3, col. 4, line 1-3).

With regards to claim 27, Elsherif et al. disclose a system wherein the or each air exit portion comprises a sheet having a larger air permeability constituting a portion of said guide sheet simultaneously serving as the garment (34, 36, 38, 40, 42, col. 3, line 64-65).

With regards to claim 28, Elsherif et al. disclose a system further comprising spacers attached to said guide sheet simultaneously serving as the garment, at important locations of said guide sheet, respectively (34, 36, 38, 40, 42, col. 4, line 5-8).

With regards to claim 29, Elsherif et al. disclose a system wherein said fixation means includes, attached thereto: the or each parallel airstream generation means; an electric- power source for supplying electric power to the or each parallel airstream

generation means; and connection means for electrically connecting the or each parallel airstream generation means to said electric-power source (col. 7, line 21-23).

With regards to claim 30, Elsherif et al. discloses all of the above, but fails to disclose: wherein said fixation means is made of a material having a low water absorptivity. It would have been obvious to one having ordinary skill in the art at the time of the invention to choose a said fixation means is made of a material having a low water absorptivity, because it has been held to be within the general skill of a worker in the art to select a known material group on the basis of its suitability for the intended use as a matter of obvious design choice. In particular, it would have been obvious to a worker in the art that any weight supporting members on an object that may become saturated would be best constructed of water impervious material, as this will prevent failure due to increased ductility.

With regards to claim 31, Elsherif et al. discloses all of the above, but fails to disclose: wherein said fixation means is formed of a material performed an antifungal process. It would have been obvious to one having ordinary skill in the art at the time of the invention to choose a said fixation means is formed of a material performed an antifungal process, because it has been held to be within the general skill of a worker in the art to select a known material group on the basis of its suitability for the intended use as a matter of obvious design choice. In particular, it would have been obvious to a worker in the art that anti-fungal processes are desirable on objects which may be

exposed to warm, mineral laden water for extended periods of time, as such an environment is ideal for the growth of odiferous or otherwise undesirable fungi.

Response to Arguments

4. Applicant's arguments filed November 24, 2008 have been fully considered but they are not persuasive.

Applicant argues that there is no support in Elsherif et al. for the air flow space to consist of only one layer. The examiner feels that the applicant's terminology of "undergarment or wearer's body" allows for both one and two layered air flow spaces, wherein the guide sheet of Elsherif et al. could be taken to be the outer layer, and the undergarment could be taken to be the inner layer, or alternatively, the guide sheet could be taken to be the entire two layered portion, and the air impact would still be against an undergarment or the wearer's body, depending on what was worn underneath it. Either interpretation is acceptable, as the applicant does not specifically claim a single layered air flow space, and the claims are read in light of the specification, but limits in the specification are not read into the claims.

Applicant further argues that choosing an air flow between the ranges of 10 m³/H and 500 m³/H would not have been self evident for one having ordinary skill in the art, and that this range was specific to the applicant's invention and displays some special property essential to the invention. The examiner responds that this range is quite broad, and covers a wide variety of fans, all of which are, according to the applicant suitable for the applicant's purpose. Certainly than, given such a broad range of

suitable fans, one of ordinary skill in the art would be inclined to pick one somewhere within this range, unless of course, applicant is arguing that such a range would not be obvious due to safety concerns.

Finally in response to applicant's argument and amendment to the effect of the hemline of Elsherif et al. not being sealed, this argument is considered moot in view of the new ground of rejection.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEPHANIE MCLAREN whose telephone number is (571) 270-7127. The examiner can normally be reached on Monday - Friday 9:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Jules & Cheryl Tyler can be reached on (571) 272-6681 & (571)-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SDM/

3/5/09

/Frantz F. Jules/
Supervisory Patent Examiner, Art Unit 3744